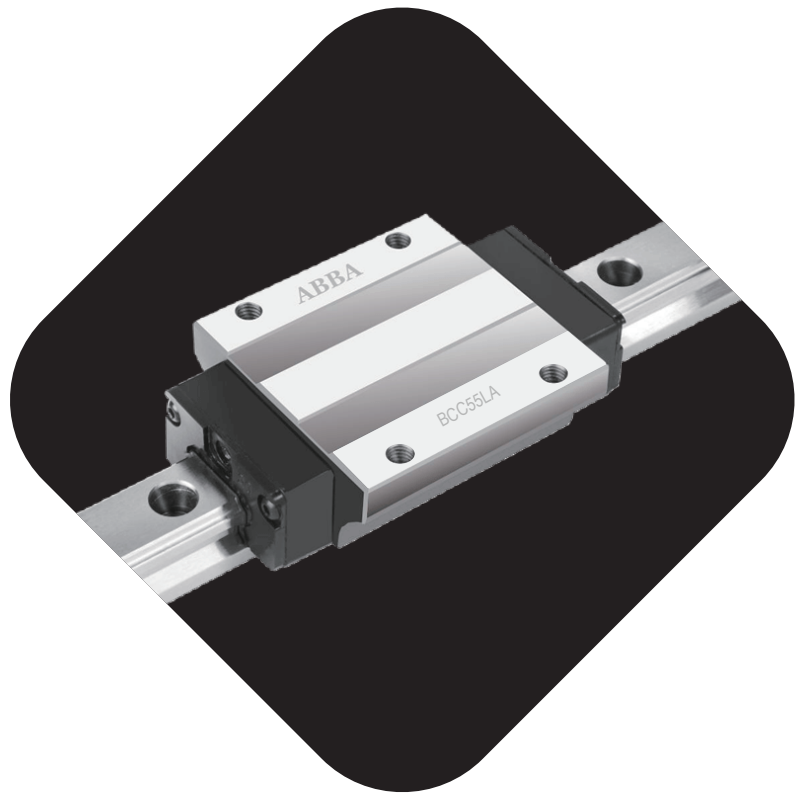


# 2

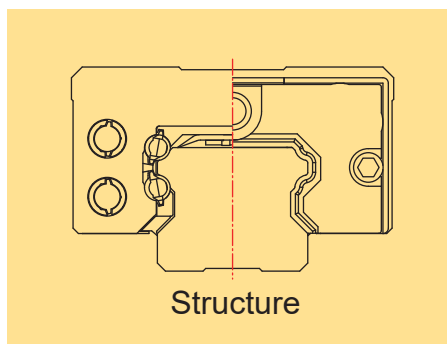
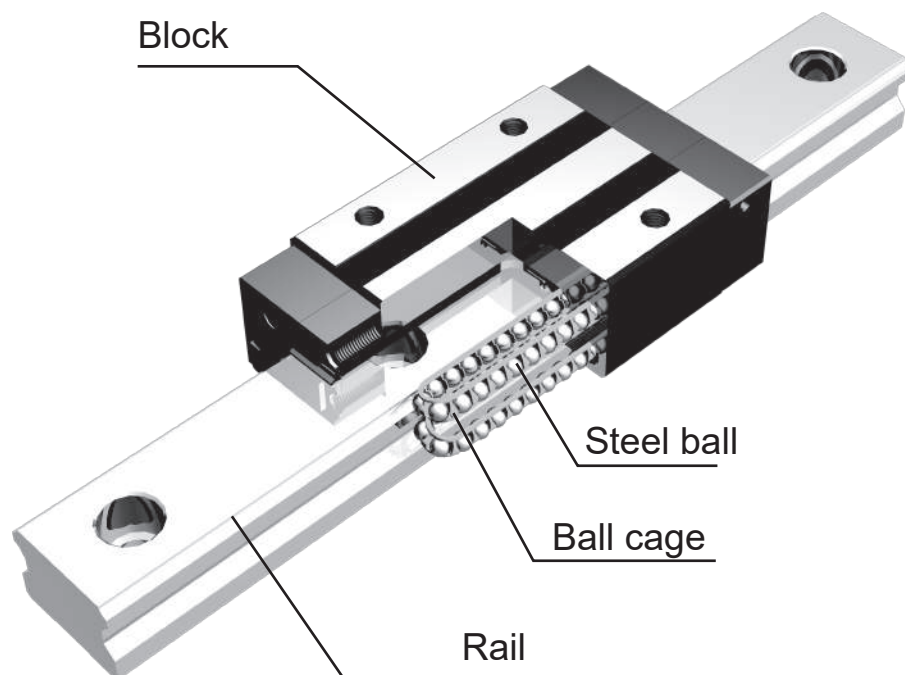
## Ball Caged Linear Guide



## 2.1 Characteristics

- 1 Interchangeable design
- 2 Equivalent loading, long service life
- 3 Good lubricity, long-term free of oil and maintenance
- 4 Equipped with ball cage, lower noise and smoother running

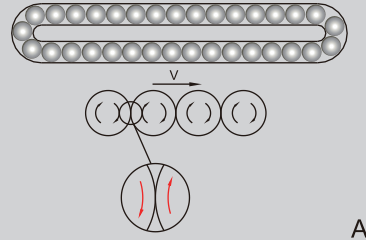
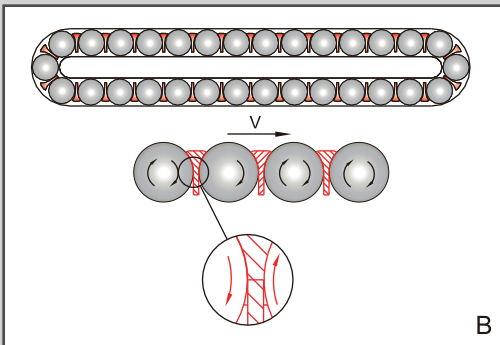
## 2.2 Construction



BC series is equipped with **ABBA**'s latest developed Ball cage, which lowers the noise, and enables high speed running, longer life time, and outstanding accuracy.

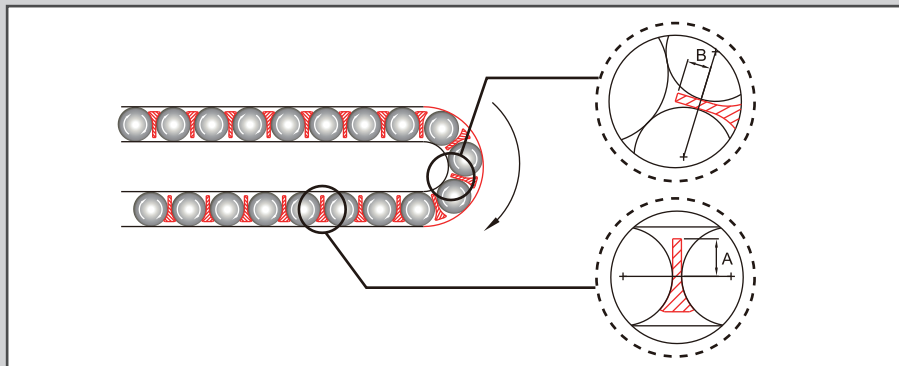
## 2.3 Feature

### New (with ball cage)



#### Feature 1

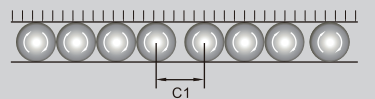
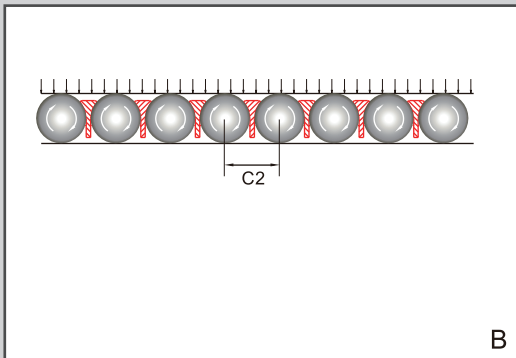
Steel ball chafes against each other in drawing A, so its friction is two times larger in drawing B, so that the life time in B is longer than in A.



#### Feature 2

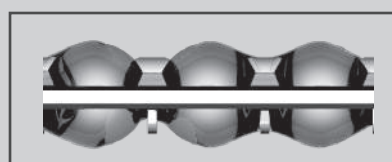
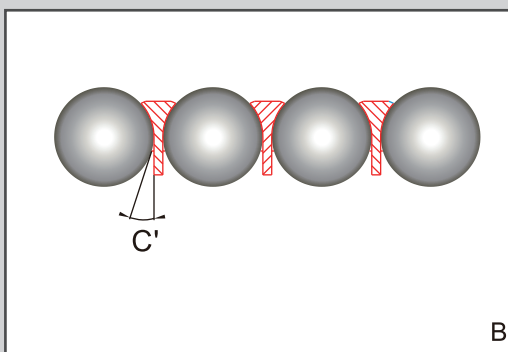
The difference between ABBA's ball cage and others' is that there will be no press and intervention from the inner part of the ball cage when it is turning so that friction is lowered and life time extends.

### New (with ball cage)

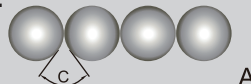


#### Feature 3

It shows in drawing B that due to the ball cage, steel balls are loaded equivalently so that their service life could be longer.



Oil membrane adheres easily between the ball cage and steel balls.



#### Feature 4

As demonstrated above, the included angle in drawing A(C) is larger than the one in drawing B(C') with ball cage. Therefore, oil membrane adheres easily in the structure of BC series.

Standard

Ball Caged

Miniature

Ball Screw

Support Unit

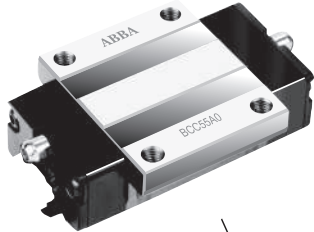
Linear Guide

Ball Screw

## 2.4 Product overview

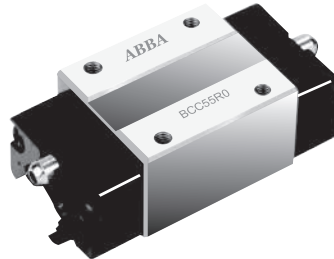
### BCC-A0

Flanged block, standard length,  
standard height



### BCC-R0

Slim-line block, standard length,  
extended height



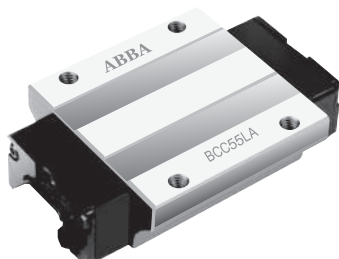
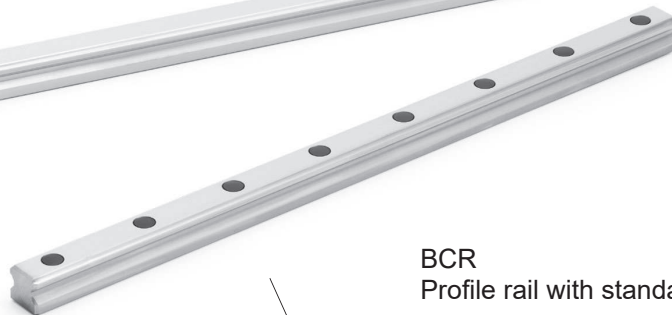
### BCR

Profile rail with blind holes



### BCR

Profile rail with standard holes



### BCC-LA

Flanged block, extended length,  
standard height



### BCC-LR

Slim-line block, extended length,  
extended height

## 2.5 Ordering key of System

B C S 5 5 - A 0 C 2 Z 1 - 1 0 8 0 0 N D 0 - A 0 S W 2

**Size** \_\_\_\_\_  
55

**Block type** \_\_\_\_\_  
 A0 Flanged block( Standard length, Standard height)  
 LA Flanged block( Extended length, Standard height)  
 R0 Slim-line block( Standard length, Extended height)  
 LR Slim-line block( Extended length, Extended height)

**End Cap Type** \_\_\_\_\_  
 C Standard End Cap

**Number of blocks per rail** \_\_\_\_\_  
 1~9 1~9 blocks per rail  
 A~W >9 blocks per rail (10=A, 11=B, 12=C...)

**Preload class<sup>1)</sup>** \_\_\_\_\_  
 ZF Clearance, Preload=0  
 Z0 No preload, Preload=0  
 Z1 Light preload, Preload=0~0.02C

**Rail length** \_\_\_\_\_  
 00080~99999 mm(1 mm steps)

**Accuracy class<sup>1)</sup>** \_\_\_\_\_  
 N Normal  
 H High  
 P Precision

**Rail hole** \_\_\_\_\_  
 D0 Standard hole(Standard hole distance, the distance of the first and last attachment holes is produced equidistantly. )  
 F0 Standard hole(Standard hole distance, the distance of the first and last attachment holes is not produced equidistantly. )  
 D4 Blind hole(Standard hole distance, the distance of the first and last attachment holes is produced equidistantly. )  
 F4 Blind hole(Standard hole distance, the distance of the first and last attachment holes is not produced equidistantly. )  
 DX Special machining, customized according to drawing number

**Join rail track** \_\_\_\_\_  
 A Yes (Refer to drawing for detail)  
 0 No

**Rail treatment<sup>2)</sup>** \_\_\_\_\_  
 0 Standard (anti-rust oil)

**Sealing** \_\_\_\_\_  
 S Standard front seal (only end seal)  
 1 Standard front seal + Scraper plate

**No. of parallel rails** \_\_\_\_\_  
 00 Single rail  
 W2~W9 Parallel rails (W2 : 2 rails, W3 : 3 rails)

1) Refer to following table for limitation

System			
Accuracy	P	H	N
Preload	—	—	ZF
	Z0	Z0	Z0
	Z1	Z1	Z1
	Z2	Z2	Z2
	Z3	Z3	Z3

2) Block surface treatment

- A. Standard: Anti-rust oil  
 B. Non-Standard: See drawing

3) Nipple/set screw quantity per block

- A. Size 20/25/30/35/45/55 : 45° nipple(1pc)+ screw(1 pc)

Standard

Ball Caged

Miniature

Ball Screw

Support Unit

Linear Guide

Ball Screw

## 2.6 Ordering key of Rail

	B	C	R	5	5	-	1	0	8	0	0	N	D	0	-	A	0
<b>Size</b>																	
55																	
<b>Rail length</b>																	
00080~99999 mm(1 mm steps)																	
<b>Accuracy class</b>																	
N Normal																	
<b>Rail hole</b>																	
D0 Standard hole(Standard hole distance, the distance of the first and last attachment holes is produced equidistantly. )																	
F0 Standard hole(Standard hole distance, the distance of the first and last attachment holes is not produced equidistantly. )																	
D4 Blind hole(Standard hole distance, the distance of the first and last attachment holes is produced equidistantly. )																	
F4 Blind hole(Standard hole distance, the distance of the first and last attachment holes is not produced equidistantly. )																	
DX Special machining, customized according to drawing number																	
<b>Rail hole</b>																	
A Yes (Refer to drawing for detail)																	
0 No																	
<b>Rail treatment</b>																	
0 Standard (anti-rust oil)																	

## 2.7 Ordering key of Block

B C C 5 5 - A 0 Z 1 - N 0 S

**Size** \_\_\_\_\_

55

**Block type** \_\_\_\_\_

- A0 Flanged block( Standard length, Standard height)
- LA Flanged block( Extended length, Standard height)
- R0 Slim-line block( Standard length, Extended height)
- LR Slim-line block( Extended length, Extended height)

**Preload class** \_\_\_\_\_

- ZF Clearance, Preload=0
- Z0 No preload, Preload=0
- Z1 Light preload, Preload=0~0.02CC

**Accuracy class** \_\_\_\_\_

- N Normal

**Block treatment** \_\_\_\_\_

- 0 Standard (anti-rust oil)

**Sealing** \_\_\_\_\_

- S Standard front seal (only end seal)
- 1 Standard front seal + Scraper plate

- 1) Nipple/set screw quantity per block  
 A. Size 20/25/30/35/45/55 : 45\*nipple(1pc)+ screw(1 pc)

Standard

Ball Caged

Miniature

Ball Screw

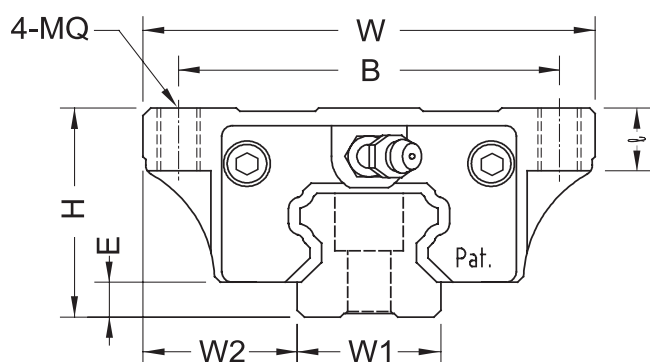
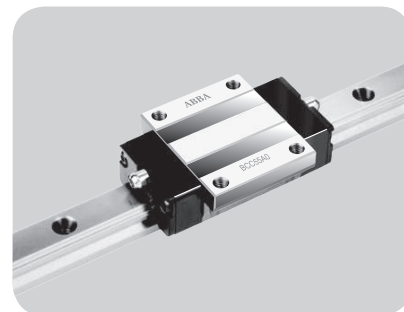
Support Unit

Linear Guide

Ball Screw

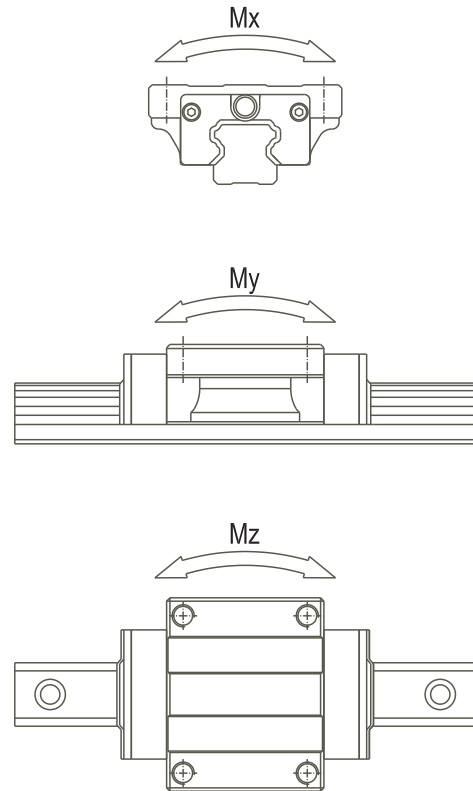
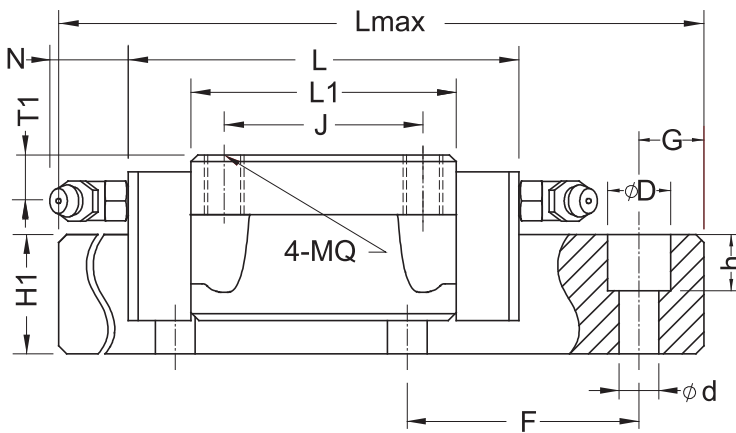
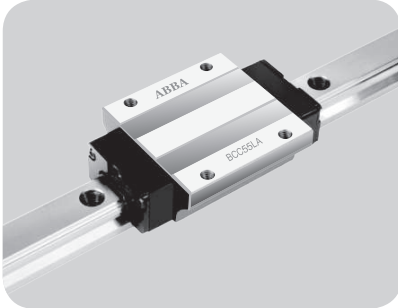
## 2.8 Dimension of Linear Guide

### 2.8.1 BCC-A0/LA



Model No.	Assembly (mm)				Block (mm)							Rail (mm)			
	H	W	W2	E	L	BXJ	MQx $\frac{1}{2}$	L1	Oil hole	T1	(N)	W1	H1	F	dxDxh
BCC55A0	70	140	43.5	12.7	181	116x95	M14x21	131	M8x1	20	16	53	38	120	16x23x20.1
BCC55LA					223			173							





Model No.	Ref. data (mm)		Basic load rating (Kgf)		Static moment (Kgf*m)			Weight	
	Lmax	G	C	C <sub>0</sub>	M <sub>x</sub>	M <sub>y</sub>	M <sub>z</sub>	Block (Kg)	Rail (Kg/m)
BCC55A0	4000	30	7600	12800	446	355	355	5.4	14.5
BCC55LA			9300	17100	580	600	600	7.1	

Standard

Ball Caged

Miniature

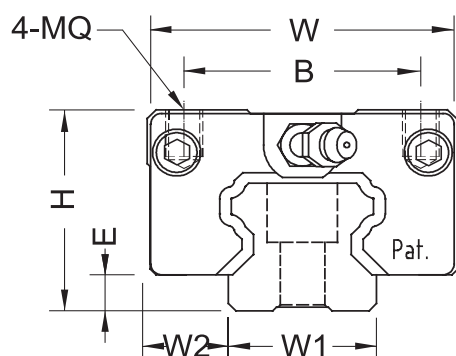
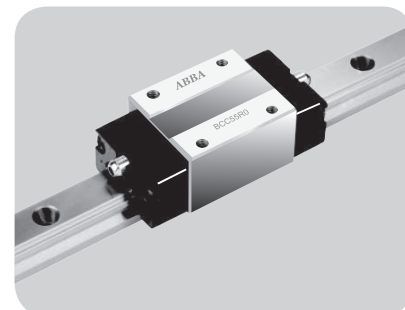
Ball Screw

Support Unit

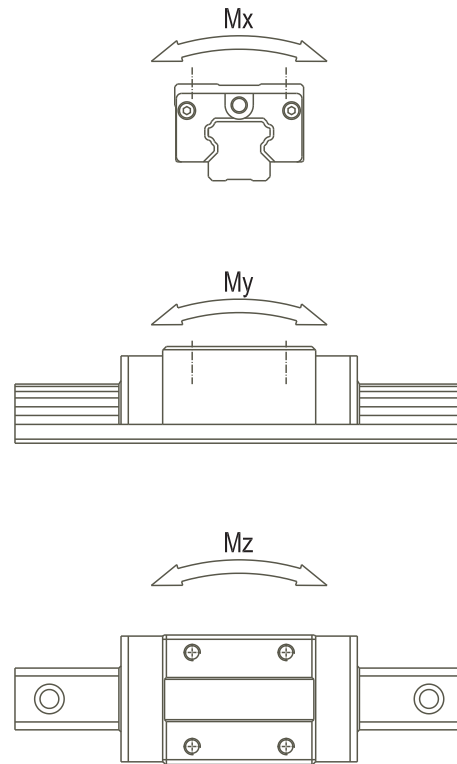
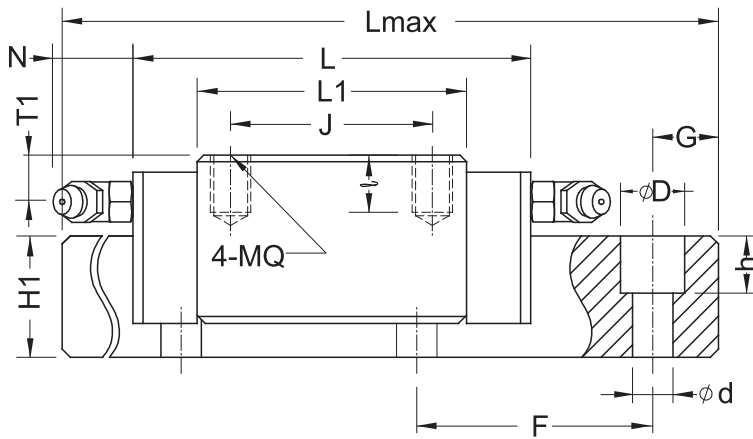
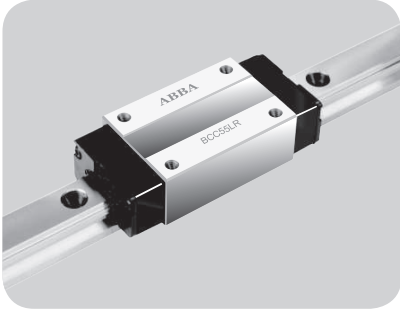
Linear Guide

Ball Screw

## 2.8.2 BCC-R0/LR



Model No.	Assembly (mm)				Block (mm)							Rail (mm)			
	H	W	W2	E	L	BxJ	MQx↓	L1	Oil hole	T1	(N)	W1	H1	F	dxDxh
<b>BCC55R0</b>	80	100	23.5	12.7	181	75x75	M12x19	131	M8x1	30	16	53	38	120	16x23x20.1
<b>BCC55LR</b>					223	75x95		173							



Model No.	Ref. data (mm)		Basic load rating (Kgf)		Static moment (Kgf*m)			Weight	
	Lmax	G	C	C <sub>0</sub>	M <sub>x</sub>	M <sub>y</sub>	M <sub>z</sub>	Block (Kg)	Rail (Kg/m)
BCC55R0	4000	30	7600	12800	446	355	355	5.2	14.5
BCC55LR			9300	17100	580	600	600	6.7	

Standard

Ball Caged

Miniature

Ball Screw

Support Unit

Linear Guide

Ball Screw